



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**DOCKET NO.: AUS000123US1**

**IN RE APPLICATION OF:**

§ § § § § §

BRUCE A. BEADLE, ET AL.

**EXAMINER: BOUTAH, ALINA A.**

SERIAL No.: 09/584,808

ART UNIT: 2143

FILED: MAY 5, 2003

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# **FOR: DYNAMIC SELECTION OF MOST EFFICIENT TRANSMISSION MEDIUM AND ROUTE FROM A CLIENT BROWSER**

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**APPEAL BRIEF UNDER 37 C.F.R. 1.192**

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Sir:

This Appeal Brief is submitted in triplicate in support of an Appeal of the Examiner's final rejection of Claims 1-9, 10-20 and 22-28 in the above-identified application. A Notice of Appeal was filed in this case on February 2, 2004. A two month extension of time is required. That extension of time is requested in the attached Petition, and a check in the amount of \$420.00 to cover the two-month extension of time is enclosed. Please charge the fee of \$330.00 due under 37 C.F.R. § 1.17(c) for filing the brief, as well as any additional required fees, to **IBM**  
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### **REAL PARTY IN INTEREST**

The real party in interest in the present Appeal is International Business Machines Corporation, the Assignee of the present application as evidenced by the Assignment recorded at reel 010858 and frame 0908 *et. seq.*

### **RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences known to Appellants, the Appellants' legal representative, or assignee, which directly affect or would be directly affected by or have a bearing on the Board's decision in the present appeal.

### **STATUS OF CLAIMS**

Claims 1-9, 10-20 and 22-28 stand finally rejected by the Examiner as noted in the Final Office Action dated December 18, 2003. Claims 9, 21, and 29 are objected to.

### **STATUS OF AMENDMENTS**

Appellants' Amendment A was entered by the Examiner. No amendments to the claims have been made subsequent to the final rejection that leads to this appeal.

### **SUMMARY OF THE INVENTION**

Appellants' invention provides a client-to-network connection functionality implemented on a client/user system that enables selection of an optimal connection (between the client system and a network) from among multiple "connection types" by which the network is accessible (*see* Figure 3 and description at page 15, line 20-page 16, line 17). As indicated by the figures and description thereof, the "connection type" includes (a) a specific server from among multiple servers, (b) a specific one of multiple connection media types (wired, wireless, etc.); and/or (3) a combination of connection medium and associated server.

Appellants' invention further provides a client graphical user interface (GUI) that enables the user to select one of the plurality of connection types (medium and/or server) to complete the client's connection to the network. The GUI enables the connection type

(server/media/combination) to be selected (*see* Figure 5A and description at page 17, line 12–page 19, line 2; *see also* page 14, lines 1-23) from among the available connection types.

Finally, in one embodiment, Appellants' invention enables a dynamic selection of a most efficient/effective route based on stored historical data. The selection of the connection type is based on a “best route” determination, which takes into account “historical data” of the connection types (page 22, lines 19 - page 23, lines 4). After a connection type is determined, the connection between the client system and the network is established via that specific connection type.

As recited by the claims, namely Claim 1, and exemplary Claims 2 and 3, the invention includes the following features:

(1) “selecting at the client a **connection type** … **including** a plurality of independent **servers**, … **connection media** …, and a server and medium **combination**; and connecting said client to a selected server …, given said selected connection type” (Claim 1); and

(2a) “wherein said selecting step includes the step of providing a **graphical user interface** with **selectable** options for each of said plurality of **connection types** in response to a user request to configure said client to connect via one or more of said plurality of connection types” (Claim 2); and/or

(2b) “wherein said selecting step includes the steps of: evaluating **historical data** about connection types associated with said client.; and selecting an **effective server connection** based on a **connection history** of said client and **present connection conditions**,” (Claim 3; emphases added).

## ISSUES

The primary issue for appeal is whether Examiner's rejections of Appellants' claims 1-8 (*sic*), 10-20 and 22-28 under 35 U.S.C. § 103(a), as being unpatentable over *Brendel*, et al. (U.S. Patent No. 5,774,660) in view of *Rosin*, et al. (U.S. Patent No. 6,397,387) are well founded. Tantamount to a resolution of that issue is a determination whether the combination of *Brendel* and *Rosin* suggests to one skilled in the art: (1) selecting a connection type (as that term is defined by Appellants' specification) and connecting a client to the network via the connection type selected; (2) "providing a graphical user interface with selectable options for each of said plurality of connection types in response to a user request to configure said client to connect via one or more of said plurality of connection types"; or (3) evaluation of historical data, connection history, and present conditions when making the determination of the effective server connection to utilize for the connection.

## GROUPING OF THE CLAIMS

For purposes of this Appeal, all claims stand or fall together as a single group.

## ARGUMENT

### **EXAMINER'S REJECTION OF APPELLANT'S CLAIMS AS BEING UNPATENTABLE OVER THE *BRENDEL* IN VIEW OF *ROSIN* IS NOT WELL FOUNDED AND SHOULD BE REVERSED.**

The combination of *Brendel* and *Rosin* does not render Appellants' invention unpatentable because that combination fails to suggest several key features of Appellants' claimed invention. Namely, the combination fails to suggest (A) selecting a connection type among multiple connection types and connecting the client system to the network via the connection type, where (i) the focus is on the actual connection between client and network and (ii) the term "connection type" refers specifically to a combination of a server (selected from among multiple available servers) and medium (selected from among multiple available media) that enables the client system to connect to the network. Notably, also, the combination does not suggest (B) a graphical user interface with selectable options for ... connecting via one or more of said plurality of connection types; or (C) evaluation of historical data, connection history, and

present conditions when making the determination of the effective server connection to utilize for the connection. The deficiencies of *Brendel* and the combination of *Brendel* and *Rosin* are explained in the sections delineated below by corresponding alphabetical labels (A, B, and C).

Appellants' hereby incorporates by reference the arguments proffered in Amendment A.

In the Final Office Action, Examiner relies on specific sections of *Brendel* to support the rejections of selecting a connection type and “connecting” the client via an effective route based on the connection type selected. *Brendel* is further being used to support the rejection of “providing a GUI” with selectable options for each connection type in response to a user request to configure the client and evaluating “historical data” about connection types when selecting an effective server.

**A. *Brendel* does not suggest and is not concerned with (i) the mechanism (connection type) or process for selecting among connection types or (ii) connecting a client to the Internet (network) via a server and medium.**

Appellants' exemplary claims are directed to first selecting a server (and connecting medium) from among a group of servers, each of which may be utilized by a client system to connect to (or access) a single background network. Appellants' exemplary claims then specifically provides “dynamically connecting” the client to the network via the selected connection server. Thus, as utilized within Appellants' claimed invention, the term “connection type” refers to connection medium and associated server that provides the actual **connection** between the client and the network.

Examiner relies on *Brendel* to support the rejection of the recited feature of “selecting a connection type” and the functionality associated with the term connection type; However, the cited section of *Brendel* (col. 2, lines 18-22) describes selecting a universal resource locator (URL) by which to initiate a session with a content server (i.e., not a network-connection server). While Appellant's invention does not specifically refer to the selectable servers as “network-connection” servers, this characteristic of the “plurality of servers” is clear from the context in which the servers are presented within the claims.

The connection by a client system to the Internet is typically routed through a server of a service provider from which the user may then access multiple different web sites (having different URLs) that may be hosted by different content servers. That is, while a single content server may host multiple URLs, multiple content servers may be provided within the Internet and made accessible to the client system once the connection between the client system and a connection server of the network is established.

Selecting one of these URLs, however, simply refers to selecting one of several accessible web sites after the Internet connection is established between the client system and connection server. Thus, selecting a URL is inherently different from and not suggestive of selecting a connection server and/or medium to establish the connection to the Internet. Those skilled in the art appreciate the technical differences in accessing content servers (for a web site associated with a URL hosted on the content server) and actually selecting a connection server (among multiple connection servers) by which to connect to (or access) the network.

At page 3 of the Final Action, Examiner admits that *Brendel* does not provide the selection features of Appellants' invention. Examiner relies on *Rosin* to support the rejection of selecting a connection type from among a plurality of connection types including servers, connection media, and server-medium combination.

Absent Appellants' claimed invention, one skilled in the art would not be inclined to combine *Rosin* with *Brendel* since *Rosin* is directed to streaming diverse content to a client system from a server via different connection mechanisms. *Brendel* in contrast describes initiating content server access from a client and performing load balancing when attempting to access a distributed content server. Thus, absent the specific teachings of Appellants' invention, there would be no suggestion in either reference to combine the features of the individual references.

However, even if the one skilled in the art would have contemplated the combination, that combination still fails to suggest key features provided by Appellant's exemplary claims.

The deficiencies of *Brendel* as a 103 reference are described in the delineated sections herein. These deficiencies are not addressed by *Rosin* or the combination of *Rosin* and *Brendel*.

*Rosin* describes an internet on-demand system for television that provides both internet content and television programming as part of a coherent interface (Abstract and Summary). From a technical standpoint, *Rosin* provides a client-server system where the client (televisor) has several available data stream connections. With *Rosin*, the **server queries the client** regarding available data stream connections to determine delivery mode for different types of data (col. 3, lines 20-25).

*Rosin* clearly does not teach or suggest a client system with a GUI that allows the **user** to **select** which connection among several available connections (including several different servers and connection media) to utilize to complete a connection to the network. Nor does *Rosin* teach or suggest a client system that dynamically connects to the network via the selected connection type.

**B. The combination does not suggest providing a client GUI to select a connection type (from among multiple connection types) using selectable options within the GUI.**

*Brendel* does not suggest providing a GUI with the selection mechanism for determining how the client system is to connected to the network. In fact, *Brendel's* system operates independent of any user selection of connection servers, but rather provides an automatic resource-based load balancing application. The specific section of *Brendel* (col. 2, lines 18-22) cited to support the rejection of this feature of Appellants' claims merely provides a description/discussion of selecting a URL by which to initiate a "session" with a web site on the Internet.

A standard web browser GUI, as would be utilized by *Brendel*, enables the initiation of a web browsing session on the web site associated with the URL entered or selected at the client system. However, those skilled in the art are aware of the functionality of a web browser in so much as it enables a session with different URL-accessible web sites once the connection between the client system and server are established. Appellants use of a GUI to enable actual selection of the connection type, however, is not suggested by *Brendel's* description of using URLs to

initiate sessions on a web site since there is no correlation to selecting a connection type and then connecting the client system to the network via that selected connection type.

*Brendel* does not provide or suggest providing a GUI that includes selectable options for selecting a connection type (server and media) by which the client actually establishes a connection to the Internet. *Brendel* assumes that the connection to the Internet exists and is concerned solely with accessing particular web sites that are housed on servers located on the Internet. This feature is also not suggested by *Rosin*.

**C. There is no mention or consideration of historical data or the use of historical data long with connection history and current conditions to determine a best route for connecting to the network.**

Appellants' claimed invention provides a dynamic process by which historical data about the type/characteristics of connection types available to the client for connecting to the network are stored within a table. The stored historical data is then utilized along with both current conditions and connection history to determine which route is the best route for establishing the client-to-network connection.

The section of *Brendel* cited to support the rejection of this feature, namely col. 2, line 29-35, describes the caching of IP addresses at a web browser. Caching of IP addresses at a local browser after the address is utilized by the browser is a common browser feature and one that is inherently different from (and not suggestive of) maintaining historical data about specific connection types (connection servers and media) used by the client to connect to the network. Further, the caching of IP addresses clearly fails to suggest the functionality of determining an effective route based on a combination of historical data, connection history and current conditions.

With respect to sections B and C above, *Rosin* also does not suggest providing a GUI of selectable options for the connection types or use of historical data, along with connection history and current conditions in selecting the connection type. Since neither *Brendel* nor *Rosin*

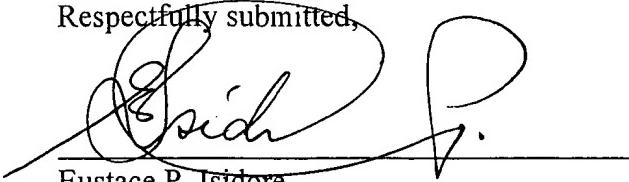
teach or suggest any of these features of Appellants' invention, the combination does not render Appellants' invention unpatentable.

With the above arguments, Appellant has clearly shown that the combination of *Brendel* and *Rosin* neither contemplates nor suggests the various **connection** features, providing a GUI with selectable options, or using historical data in determining a best route. One skilled in the art would not find Appellants' invention obvious in light of the combination. Appellants' claims are therefore not unpatentable over the combination and should be allowed. For those reasons, Examiner's rejection of Appellants' claims is not well founded and should be reversed.

## CONCLUSION

Appellants have pointed out with specificity the manifest error in the Examiner's rejections, and the claim language which renders the invention patentable over the combination of references. Appellants, therefore, respectfully requested that this case be remanded to the Examiner with instructions to issue a Notice of Allowance with respect to all pending claims.

Respectfully submitted,



Eustace P. Isidore

*Registered with Limited Recognition (see attached)*

DILLON & YUDELL LLP

8911 North Capital of Texas Highway

Suite 2110

Austin, Texas 78759

512.343.6116

ATTORNEY FOR APPELLANTS

## APPENDIX

1. A method for providing a client with a connection to a network, said method comprising the steps of:

selecting at the client a connection type from among a plurality of connection types including a plurality of independent servers, a plurality of connection media for connection to at least one of said plurality of independent servers, and a server and medium combination; and

in response to a receipt of a connection request, dynamically connecting said client to a selected server of said network based on a determination of an effective route for completing said connection request, given said selected connection type.

2. The method of Claim 1, wherein said selecting step includes the step of providing a graphical user interface with selectable options for each of said plurality of connection types in response to a user request to configure said client to connect via with one or more of said plurality of connection types.

3. The method of Claim 2, wherein said selecting step includes the steps of:

evaluating historical data about connection types associated with said client; and

selecting an effective server connection based on a connection history of said client and present connection conditions.

4. The method of Claim 3, wherein said evaluating step includes the step of accessing said connection history from a table of server connection parameters, which are utilized to determine said effective connection route.

5. The method of Claim 4, wherein said dynamically connecting step includes the step of evaluating said server connection parameters for each of a plurality of servers to determine said effective connection route relative to all other possible routes within said connection type.

6. The method of Claim 5, wherein said dynamically connecting step further includes the step of encoding routing information about said effective connection route in a connection protocol of said client.
7. The method of Claim 6, wherein said encoding step includes the step of including a callback mechanism in said connection protocol, wherein relevant connection information, including one or more of said connection parameters, is returned to said client for updating said table.
8. The method of Claim 7, wherein said client is equipped with multiple connection media and said dynamically connecting step includes the step of selecting one of said multiple connection media to complete said connection request.
9. The method of Claim 2, wherein said selecting step is completed via a GUI and includes the step of selecting said connection type utilizing:
  - a first set of user selectable buttons representing a plurality of connection media, said buttons having a first display characteristic indicating when a functionality associated with each of said first set of user selectable buttons is presently available, a second display characteristic indicating when said functionality is not available, and a third display characteristic indicating when one of said first set of user selectable buttons has been selected; and
  - a second set of user selectable buttons representing a user preference for server connections including a default server selection, an override default selection, and an automatic routing selection.
10. A computer program product for utilization within a client for connecting to servers of a network, said program product comprising:
  - a computer readable medium; and
  - program code on said computer readable medium, which provides:
    - an interface for receiving user input and connection requests; and
    - a connection utility for dynamically connecting said client to one of said servers in response to a connection request, wherein said one of said servers is selected based on a determination of an effective route for completing said connection request.

11. The computer program product of Claim 10, wherein program code for said interface further comprises program code for a connection selection interface for receiving user selection of a desired connection type, wherein said desired connection type is selected from a plurality of selection types including a default server connection, a changeable default server connection with a suggestion function for providing an optimal server connection during a later connection, and an effective server connection based on a connection history of said client.

12. The computer program product of Claim 11, wherein said program code for said connection utility includes:

program code for managing a connectivity table utilized to record a plurality of connection parameters for each of said servers;

program code for determining said effective route based on said connection parameters;

program code for encoding a connection protocol with said effective route; and

program code for appending a call-back to said connection protocol, whereby connection parameters from a current connection is returned to update said connectivity table.

13. A system for providing a client with a connection to a network, said system comprising:

means for selecting at the client a connection type from a plurality of connection types including a plurality of independent servers, a plurality of connection media for connection to at least one of said plurality of independent servers, and a server and medium combination; and

in response to a receipt of a connection request, means for dynamically connecting said client to a selected server of said network based on a determination of an effective route for completing said connection request, given said selected connection type.

14. The system of Claim 13, wherein said selecting means includes a graphical user interface with selectable options for each of said plurality of connection types in response to a user request to configure said client with one of said plurality of connection types.

15. The system of Claim 14, wherein said selecting means includes:

means for evaluating historical data about connection types associated with said client; and;

means for selecting an effective server connection based on a connection history of said client and present connection conditions.

16. The system of Claim 15, wherein said evaluating means includes means for accessing said connection history from a table of server connection parameters, which are utilized to determine an effective route.

17. The system of Claim 16, wherein said dynamically connecting means includes means for evaluating said server connection parameters for each of a plurality of servers to determine said effective connection route relative to all other possible routes within said connection type.

18. The system of Claim 17, wherein said dynamically connecting means further includes means for encoding routing information about said effective connection route in a connection protocol of said client.

19. The system of Claim 18, wherein said encoding means includes means for including a call-back mechanism in said connection protocol, wherein relevant connection information, including one or more of said connection parameters, is returned to said client for updating said table.

20. The system of Claim 13, wherein said client is equipped with multiple connection media and said dynamically connecting means includes means for selecting one of said multiple connection media to complete said connection request.

21. The system of Claim 13, wherein said selecting means includes a GUI having:  
a first set of user selectable buttons representing a plurality of connection media, said buttons having a first display characteristic indicating when a functionality associated with each of said first set of user selectable buttons is presently available, a second display characteristic

indicating when said functionality is not available, and a third display characteristic indicating when one of said first set of user selectable buttons has been selected; and

a second set of user selectable buttons representing a user preference for server connections including a default server selection, an override default selection, and an automatic routing selection

22. A computer program product for providing a client with a connection to a network, said program product comprising:

a computer readable medium;

program instructions stored on said computer readable medium for:

enabling client selection of a connection type from a plurality of connection types including a plurality of independent servers, a plurality of connection media for connection to at least one of said plurality of independent servers, and a server and medium combination; and

in response to a receipt of a connection request, dynamically connecting said client to a selected server of said network based on a determination of an effective route for completing said connection request, given said selected connection type.

23. The computer program product of Claim 22, wherein said program instructions for said enabling step includes program instructions for providing a graphical user interface with selectable options for each of said plurality of connection types, in response to a user request to configure said client with one of said plurality of connection types.

24. The computer program product of Claim 23, wherein said program instructions for said enabling step includes program instructions for:

evaluating historical data about connection types associated with said client; and

selecting an effective server connection based on a connection history of said client and present connection conditions.

25. (presently amended) The computer program product of Claim 24, wherein said program instructions for said evaluating step includes program instructions for accessing said connection

history from a table of server connection parameters, which are utilized to determine an effective connection route.

26. The computer program product of Claim 25, wherein said program instructions for said dynamically connecting step further includes program instructions for encoding routing information about said effective connection route in a connection protocol of said client.

27. The computer program product of Claim 26, wherein said encoding means includes means for including a call-back mechanism in said connection protocol, wherein relevant connection information, including one or more of said connection parameters, is returned to said client for updating said table.

28. The computer program product of Claim 27, wherein said client is equipped with multiple connection media and said program instructions for said dynamically connecting steps includes program instructions for selecting one of said multiple connection media, which provides the effective connection route, to complete said connection request.

29. The computer program product of Claim 22, further comprising program instructions for providing a graphical user interface of a browser application, comprising:

a first set of user selectable buttons representing a plurality of connection media, said buttons having a first display characteristic indicating when a functionality associated with each of said first set of user selectable buttons is presently available, a second display characteristic indicating when said functionality is not available, and a third display characteristic indicating when one of said first set of user selectable buttons has been selected; and

a second set of user selectable buttons representing a user preference for server connections including a default server selection, an override default selection, and an automatic routing selection.